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Un-Jin Choi

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EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/643,867

Applicant(s)

CHOI, UN-JIN

Examiner

William J. Klimowicz

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections

Insofar as the claims can be best understood in light of the Applicant's disclosure, the following rejections, articulated in detail, are deemed *prima facie* appropriate, based on a preponderance of the evidence.

As recited **MPEP§2106**:

Office personnel are to give claims their ***broadest reasonable interpretation*** in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). ***Limitations appearing in the specification but not recited in the claim are not read into the claim.*** *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow. . . . The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed. . . . An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process."). [Emphasis in bold italics added].

As set forth in the **MPEP§ 706**, "the standard to be applied in all cases is the '***preponderance of the evidence***' test. In other words, ***an examiner should reject a claim*** if, in view of the prior art and evidence of record, ***it is more likely than not that the claim is unpatentable.***" .") Emphasis in bold italics added.

Additionally, it is noted that the following rejections are being made in view of the recent Supreme Court decision on *KSR Int'l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 11-19 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Otani et al. (JP 09-237456 A).

As per claims 1, 11 and 26, Otani et al. (JP 09-237456 A) discloses an optical disc drive (1) comprising: a deck (tray (3)) having a protrusion (13) on which a spindle motor that rotates an optical disc (12) and an optical pickup sliding along a radial direction of the optical disc drive (1) are mounted (e.g., see, *inter alia*, paragraph [0033] of enclosed machine-English translation); a “lower” case (7) (invert, e.g., FIG. 3) has a penetration (8) formed by penetrating through a portion of the lower case (7) facing the protrusion (13) such that the protrusion (13) does not interfere with the portion of the lower case (7) while the deck (3) slides; and a cover (6) that covers the penetration.

Additionally, as per claim 11, the optical disc drive (1) includes the lower case (7) (e.g., invert FIG. 3), having an upper and a lower surface - see FIG. 3, including a main control board (13) controlling the operation of the slim optical disk drive (1), wherein the deck (2) which slides in and out of the lower case occupying a volume of protruding space in which a spindle motor (6) and an optical pickup (5) are mounted.

Additionally, as per claim 26, the deck (3) which slides in and out of the lower case (7) comprising a protrusion (13 - portion of spindle motor) occupying a volume of protruding space in which a spindle motor and an optical pickup are directly mounted (see FIG. 3 and paragraph [0033]) without space between the spindle motor, and the deck, a sliding limit of the protrusion (13) corresponding to an edge of the penetration (8) - see FIG. 3, as per claim 11, as well; and the cover (6) covering the penetration (8), wherein the protruding space has a substantially same shape as the penetration(8) formed by omitting and/or removing a portion of the lower case (7) - see FIG. 4, the protruding space having a substantially similar shape as the penetration (8) such that two and/or three dimensions of the protruding space fit within a plane and/or volume that has been removed which forms the penetration (8), such that if the penetration was not formed in the lower case (7), the protrusion would occupy at least a portion of the two dimensional and/or three dimensional protruding space when the deck (3) resides within the optical disc drive (1).

As per claim 2, the cover (6) covers the penetration so that a lower surface of the cover (6) does not protrude to a lower surface of the lower case (1) (e.g., see FIGS. 3 and 4).

As per claims 3 and 12, discloses wherein the cover (6) includes a plate that is thinner than the lower case (7) - see FIG. 5 and paragraph [0023] of enclosed machine-English translation)

As per claim 4, wherein the penetration (8) comprises a placing part that is prepared at the edge of the penetration and has a lower surface (8a) recessed by a thickness of the lower case (7) from the lower surface of the lower case (e.g., see FIGS. 3 and 4).

As per claim 13, wherein the lower surface of the cover (6) does not extend lower than a lower surface of the lower case (7) (e.g., see FIG. 5).

As per claim 14, further comprising a placing part (e.g., 8a, and/or 8b - see FIG. 4)), having an upper and a lower surface, along an edge of the penetration, transversely extending from the edge of the protrusion - see FIG. 4.

As per claim 15, wherein the upper surface of the placing part (8a and/or 8b) is level with the upper surface of the lower case (7).

As per claim 16, further discloses wherein the upper surface of the placing part (8a) is lower than the upper surface of the lower case (7).

As per claim 17, further discloses wherein the lower surface of the placing part (8a) is lower than the upper surface of the lower case by a thickness of the cover (6)- see FIG. 5 (e.g. inverted).

As per claim 18, wherein the lower surface of the placing part is formed higher than the lower case by the thickness of an adhesive *when* the cover is adhered onto the placing part.

Note that not only is claim 18 a product-by-process limitation (i.e., “adhered,” is also includes a conditional limitation “*when* the cover is adhered onto the placing part,” which is not a positive limitation in that the event is not required to have taken place).

As it pertains to claims 5, 6 and 19, the product by process limitations in these claims (e.g., “wherein the cover is adhered onto the placing part,” and “wherein the cover is fixed onto the placing part by spot welding”) are directed to the product *per se*, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17(footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the

patentability of the final structure of the product “gleaned” from the process limitations or steps, which must be determined in a “product by process” claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-10 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otani et al. (JP 09-237456 A).

See the description of Otani et al. (JP 09-237456 A), *supra*.

Additionally, as per claims 9, 10, 24 and 25, although Otani et al. (JP 09-237456 A) does not expressly states wherein the optical pickup serves to reproduce data from a CD-ROM and records data on and reproduces data from a CD-RW or to reproduce data from a CD-ROM, record data on and reproduce data from a CD-R, and reproduce data from a DVD, such disc are well known and ubiquitous.

Official notice is taken that CD-R, CD-ROMs and DVDs are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the device of Otani et al. (JP 09-237456 A) be capable of serving CD-Rs, CD-ROMS, CD-RWs and DVDs as is well known in the art.

The rationale is as follows: one of ordinary skill in the art would have been motivated to have the device of Otani et al. (JP 09-237456 A) be capable of serving CD-Rs, CD-ROMS, CD-RWs and DVDs as is well known in the art in order to be able to read high density discs with large capacity (e.g., DVDs) while also being able to record information onto a CD (e.g., CD-Rs and CD-RWs) as is well known, established and appreciated in the art.

Additionally, as per claims 7, 8, and 20-23, although Otani et al. (JP 09-237456 A) describes the requisite flexible printed circuit board, and the associated FPC (e.g., see paragraph [0025] of Otani et al. (JP 09-237456 A)), no detailed description is provided as to how the circuit board and FPC are configured, as per claims 7, 9 and 20-23.

Official notice is taken that main control printed circuit boards and FPC's for the type of optical disc drive disclosed by Otani et al. (JP 09-237456 A) are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the device of Otani et al. (JP 09-237456 A) as having the configured with the FPC and main control, board, as per claims 9, 10 and 20-23.

The rationale is as follows: It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the device of Otani et al. (JP 09-237456 A) as having the configured with the FPC and main control, board, as per claims 9, 10 and 20-23, in order to provide a deck that can communicate with the control board, in a manner well known, established and appreciated in the art. Moreover, it is noted that even if Applicant's were to amend the claims to provide that penetration at an opposite side of the case (7) of Otani et al. (JP 09-237456 A), no new or unobvious result is seen to be obtained by the rearrangement of parts.

An invention that would have been obvious is not patentable. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). *See also KSR*, 127 S.Ct. at 1734, 82 USPQ2d at 1391 ("While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.")

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *id.* at 1739, 82 USPQ2d at 1395. In particular, the Court reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than

yield predictable results.” *Id.* The Court stated that there are “[t]hree cases decided after *Graham* [that] illustrate this doctrine.” *Id.* at 1739, 82 USPQ2d at 1395. “In *United States v. Adams*, . . . [t]he Court recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *Id.* at 1739-40, 82 USPQ2d at 1395. “In *Anderson 's-Black Rock, Inc. v. Pavement Salvage Co.*, . . . [t]he two [pre-existing elements] in combination did no more than they would in separate, sequential operation.” *Id.* at 1740, 82 USPQ2d at 1395. “[I]n *Sakraida v. AG Pro, Inc.*, . . . the Court derived from the precedents the conclusion that when a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious.” *Id.* at 1740, 82 USPQ2d at 1395-96 (internal quotation omitted). The principles underlining these cases are instructive when the question is whether a patent application claiming the combination of elements of prior art is obvious.

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740, 82 USPQ2d at 1396. The operative question is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

Given, the teachings of Otani et al. (JP 09-237456 A), the level of skill in the art, and small difference between Otani et al. (JP 09-237456 A) and the subject matter of the claims, the Examiner concludes that the relocating of the penetration (8) of Otani et al. (JP 09-237456 A) within the side (7), to the side (5), where perhaps a main control board is mounted, would have been obvious given that the teaching of Otani et al. (JP 09-237456 A) is to reduce the height of an optical disc drive by providing a penetration which is directly opposite to a protrusion on the sliding deck, such that the protrusion does not interfere with the portion of a confronting housing.

Response to Arguments

In a Response filed on December 18, 20007, the Applicant states at page 6:

The rejections based on Otani are respectfully traversed. Using independent claim 1 as an example, this claim recites a protrusion on which a spindle motor and an optical pickup are mounted. The Examiner relies upon the guide 13 of Otani. However, nothing is mounted on this element.

The Examiner notes that claims 11 and 26, certainly do not “recite[] a protrusion on which a spindle motor and an optical pickup are mounted” and Applicant provides no basis or argument as to the merits of the rejections of any pending claims other than claims 1 and 2.

As it pertains to the Applicant’s remarks regarding claim 1, the Examiner maintains that Otani et al. (JP 09-237456 A) discloses an optical disc drive (1) comprising: a deck (tray (3)) having a protrusion (13) on which a spindle motor that rotates an optical disc (12) and an optical pickup sliding along a radial direction of the optical disc drive (1) are mounted (e.g., see, *inter*

alia, paragraph [0033] of enclosed machine-English translation); a “lower” case (7) (invert, e.g., FIG. 3) has a penetration (8) formed by penetrating through a portion of the lower case (7) facing the protrusion (13) such that the protrusion (13) does not interfere with the portion of the lower case (7) while the deck (3) slides; and a cover (6) that covers the penetration.

That is, the Examiner has interpreted the claim language as meaning that the deck (tray (3)) has a protrusion (13). Additionally, as set forth in the claim, the deck also has mounted thereto, a spindle motor that rotates an optical disc (12) and an optical pickup sliding along a radial direction of the optical disc drive (1).

In hindsight, while Applicant’s interpretation is somewhat reasonable, i.e., that it is the protrusion on which the spindle motor and optical pickup are mounted, claim 1, as presently drafted, allows for another reasonable interpretation, in which a deck is provided and has a protrusion, and mounted on the deck, are the optical pickup and the spindle motor. This interpretation clearly fits with the Applicant’s description as set forth in Applicant’s drawings and specification.

Applicant also states:

Furthermore, claim 2 recites the cover covers the penetration so that a lower surface of the cover does not protrude to a lower surface of the lower case. The Examiner relies upon the sheathing 6 of Otani. However, this element does not cover any penetration. Instead, this element forms the boundaries of the notching 8 that the Examiner relies upon as corresponding to the penetration.

The Examiner disagrees. As per claim 2, the cover (6) covers the penetration so that a lower surface of the cover (6) does not protrude to a lower surface of the lower case (1). This is *clearly* seen in FIG. 4.

The Examiner notes that claims 11 and 26, certainly do not “recite[] a protrusion on which a spindle motor and an optical pickup are mounted” and Applicant provides no basis or argument as to the merits of the rejections of any pending claims other than claims 1 and 2. Thus, it appears that Applicant has acquiesced the remaining claims rejections, based on a lack of any arguments as it pertains to the remaining independent claims (e.g., claims 11 and 26, and claims that depend therefrom).

Conclusion


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Friday (7:30AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


William J. Klimowicz
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WJK